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| 09/981,431 | 10/16/2001 | Michael T. Andreas | MTI-31555 | 5688 |
| 31870 | 7590 | 04/20/2004 | EXAMINER | |
| WHYTE HIRSCHBOECK DUDEK S.C. | | | KORNAKOV, MICHAEL | |
| 555 EAST WELLS STREET | | | ART UNIT | |
| SUITE 1900 | | | PAPER NUMBER | |
| MILWAUKEE, WI 53202 | | | 1746 | |

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/981,431

Applicant(s)

ANDREAS, MICHAEL T.

Examiner

Michael Kornakov

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-79, 139 and 140 is/are pending in the application.
- 4a) Of the above claim(s) 8, 11-14, 21, 25, 29, 38-41, 47, 48, 67-69, 74, 75, 78 and 79 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 15-20, 22-24, 26-35, 37, 42-47, 49-51, 55-66, 70-72, 76, 77, 139 and 140 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-79, 139 and 140 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicants amend claim 1 to introduce the limitation of "effective amount" and the balance of a composition being solvent. Claim 18 is amended to recite the balance of a composition being water. Claim 31 is amended to recite the effective amount of antimicrobial agent to inhibit bacterial growth, and also recites the balance of a composition being water. Claims 80-138 are cancelled. New claims 139 and 140 are added. The recited "effective amounts of a cleaning agent" in claim 1 can be determined in light of the instant specification, and therefore one skilled in the art could determine specific values for the amount based on the instant disclosure. See *In re Mattison*, 509 F.2d 563, 184 USPQ 484 (CCPA 1975), *In re Halleck*, 422 F.2d 911, 164 USPQ 647 (CCPA 1970).

2. Applicant previously elected the following species:

antimicrobial agent -sorbic acid and its derivatives;

solvent -water

residual particles - metal particles

The following claims are readable on the elected species:

1-7, 9, 10, 15-20, 22-24, 26-28, 30-37, 42-46, 49-66, 70-73, 76 and 77 and new claims 139, 140.

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3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-7, 9, 10, 15, 18-20, 22-24, 26-28, 30-37, 42-46, 49-66, 70-73, 76 and 77 stand rejected, and claims 139, 140 are rejected under 35 U.S.C. 102(b) as being anticipated by Dhillon et al (U.S. 4,912,021).

Dhillon discloses composition containing:

- a. a mono-, di-, or tri-sodium potassium or lithium phosphate; and
 - b. benzyl alcohol, phenoxyethanol or phenoxypropanol; and
 - c. polyvinyl pyrrolidone, dextrin, poly (methyl vinyl ether/maleic acid) or gum arabic; and
 - d. **citric acid or benzoic acid**; (antimicrobial agent elected by Applicants) and
 - e. sodium or potassium octyl sulfate; and
 - f. sodium, potassium or lithium benzoate; and
 - g. **sodium, potassium or ammonium citrate**; and
 - h. **sodium, potassium or ammonium sorbate** (cleaning agent elected by Applicants); and
 - i. **sufficient water**
- (abstract).

Therefore, Dhillon discloses a composition that contains all ingredients identical to those elected by Applicant. This clearly reads on the limitations of the instant claims 1-7, 9, 10, 18, 19, 20, 22, 23, 28, 30-35, 37, 139, 140. The mixture preferably has a pH which is in the range of from about 5.8 to about 7.8, more preferably from about 6.0 to

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about 7.0 and most preferably from about 6.3 to about 6.6 . This reads on the limitations of the instant claims 15 and 26.

With specific regard to claims reciting the amounts of cleaning agent and antimicrobial agent, it is best reflected in claim 1 of Dhillon col. 6 and 7 : composition contains from about 0.1% to about 10.0% by weight of the composition of one or more acids selected from the group consisting of citric acid and benzoic acid; and from about 0.2% to about 10.0% by weight of the composition of one or more components selected from the group consisting of sodium, potassium and ammonium citrate; from about 1.0% to about 15.0% by weight of the composition of one or more compounds selected from the group consisting of sodium, potassium and lithium benzoate; and from about 0.2% to about 15.0% by weight of the composition of one or more components selected from the group consisting of sodium, **potassium and ammonium sorbate** (antimicrobial agent elected by Applicant); This meets the limitations of the instant claims 42-47, 49-52, 54-66, 70, 72, 73, 76, 77. It is emphasized that since the composition of Dhillon is identical to that instantly claimed it is fully capable of performing all actions as recited in the instant claims.

It is noted that the preamble in composition claims recites a statement of intended use or purpose, and in the instant case does not limit the scope of the claim, since the statements in preamble merely define the context in which the invention operates, DeGeorge v. Bernier, 226 USPQ 758,761, n.3 (Fed.Cir. 1985).

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Likewise the prior art reference disclosing the composition need not disclose a utility to defeat patentability under 35 U.S.C. § 102. In re Schoenwald, 964 F. 2d 1122, , 1123-1124, 22 USPQ 2d. 1671, 1672-1673 (Fed. Cir. 1992).

It is further noted that by the virtue of the transitional phrase comprising the instantly claimed composition allows the presence of any other major ingredients even in the major amounts. With specific regard to the amended claim 31, it is noted that Dhillon utilizes identical antimicrobial agent in the amount identical to that instantly claimed, and therefore, such agent will be fully capable of inhibit bacterial growth in the composition of Dhillon.

4. Claims 1-7, 9, 15, 18-20, 22-24, 26, 27, 28-35, 37, 42-47, 49-51, 55-66, 70-72, 76, 77 stand rejected and new claims 139, 140 are rejected under 35 U.S.C. 102(b) as being anticipated by Pregozen (U.S. 5,141,803).

Pregozen discloses an aqueous composition containing (a) 0.02-0.25 wt.% of potassium sorbate (antimicrobial gent) ; (b) 0.05-0.20 wt.% of citric acid (cleaning agent); (c) 0.02-0.20 wt.% of disodium salt of EDTA; (d) 0.03-0.24 wt.% of cationic biocide; and (e) water to 100 wt.%. Composition has pH 3.5-4.5. Major amount of water employed in the composition is deionized water. Relative amounts of ingredients of composition are within the claimed range (abstract, col.2, line 65 through 3, line 9). Composition in Table in col. 6 recites potassium sorbate (antimicrobial gent of the instant claims) , citric acid (cleaning agent of the instant claims) and deionized water in the amounts as instantly claimed. It is once again emphasized that since the claimed

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compositions are not novel, they are not rendered patentable by recitation of properties, whether or not these properties are shown or suggested in prior art, ***In re Spada***, 911 F 2d 705, 709 15 USPQ 1655, 1658 (Fed. Cir. 1990). With regard to presently amended claim 31, the same rationale, as applied above for Dhillon's reference is incorporated herein in its entirety.

5. Claims 16 and 17 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Dhillon in view of Small (U.S. 6,156,661).

Dhillon discloses the composition as instantly claimed, utilizing effective amount of sorbic acid and its salts as antimicrobial agents and effective amounts of citric acid and its salts as cleaning agents. Dhillon does not specifically recite the buffering agents, such as ammonium hydroxide or TMAH.

The use of TMAH, as buffering agent is known and routinely used in the art. Thus, Small discloses composition for removal of chemical residues from metal or dielectric surfaces or for removal of residues after chemical mechanical polishing of a copper surface, which is an aqueous solution with a pH between about 3.5 and about 7. The composition contains a monofunctional, **difunctional** or trifunctional organic acid and a buffering amount of a quaternary amine, ammonium hydroxide (abstract). One of the preferred compositions contains citric acid, ammonium hydroxide and deionized water (Table VII in col. 11)

Since Dhillon is concerned with maintaining the pH of a composition in a specific range, and Small uses TMAH in a post CMP cleaning solution for the same purpose, a

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person skilled in the art would have found it obvious to utilize the buffering agent of Small in compositions in order to buffer the solution and thus to arrive at the instant claims 16 and 17.

In the alternative, since the cleaning gent of Small is identical to those of Dhillon and since Small also utilizes formic acid in his cleaning composition claims 1 and 11), which is an antimicrobial agent, a person skilled in the art would have found it obvious to utilize both citric acid (cleaning agent) and formic acid (as per Small- antimicrobial agent) or sorbic acid (antimicrobial agent), as taught by Dhillon in combination with ammonium hydroxide of small to maintain the desired pH and thus to arrive at the instant claims.

Response to Arguments

6. Applicant's arguments filed 01/29/2004 have been fully considered but they are not persuasive. The crux of Applicants arguments is that Dhillon requires the inclusion of about 0.1% to 10.0% by weight resins in the composition - e.g., polyvinyl pyrrolidone, dextrin, and therefore, Dhillon does not teach Applicants' composition.

In response to this, Applicants are reminded that the transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps, even in the major amounts. See, e.g., *Genentech, Inc. v. Chiron Corp.*, 112 F.3d 495, 501, 42 USPQ2d 1608, 1613 (Fed. Cir. 1997) *Comprising* is a term of art used in claim language which means that the named

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elements are essential, but other elements may be added and still form a construct within the scope of the claim. *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 229 USPQ 805 (Fed. Cir. 1986); *In re Baxter*, 656 F.2d 679, 686, 210 USPQ 795, 803 (CCPA 1981); *Ex parte Davis*, 80 USPQ 448, 450 (Bd. App. 1948) (“comprising” leaves “the claim open for the inclusion of unspecified ingredients even in major amounts”).

7. Applicants’ next argument is concerned with claim 62 that recites the cleaning composition and antimicrobial agent and solvent are in the amounts sufficient to inhibit microbial growth within the cleaning composition, to remove residual particles, and to inhibit microbial deposition. Applicants allege that the composition of Dhillon does not teach such a utility of the composition.

In response to this, Applicants are reminded that the composition is claimed, not the method of using it, wherein the ingredients of the composition, as well as relative amounts of these ingredients are clearly anticipated by Dhillon’s reference, and therefore, the composition of Dhillon is fully capable of performing the same action, as the claimed composition does. The discovery of a new function for a previously known composition cannot impart patentability of the known composition. See *In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990); *Titanium Metals Corp. of Am. v. Banner*, 778 F.2d. at 780, 227 USPQ at 777-778. Likewise, the prior art reference **disclosing the composition** need not disclose a utility to defeat patentability under 35 U.S.C. § 102. *In re Schoenwald*, 964 F.2d 1122, , 1123-1124, 22 USPQ 2d. 1671, 1672-1673 (Fed. Cir. 1992).

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8. With regard to Pregozen reference, Applicants arguments reside in contention that Pregozen composition unlike Applicant's composition is formulated with two specific cationic biocides - polyhexamethylene biguanide hydrochloride and poly(oxyethylenedimethyliminio) ethylene (dimethyliminio)ethylene dichloride.

This statement is not found persuasive and does not remove the Pregozen reference from the scope of 35 USC 102 (b) rejection, because the transitional phrase "COMPRISING" in the instant claims, allows any other unspecified ingredients, even in the major amounts in the composition. The supporting case laws are presented above, in paragraph 6 of the present communication.

Applicants further argue that Pregozen "effectively teaches away" from a composition containing sorbic acid, and citric acid without the presence of ethyl alcohol, as being ineffective to provide adequate protection against microbial contamination. In support of such statement, Applicants refer to col.1, lines 55-60.

With all due respect to Applicants opinion, Applicants attention is drawn to the fact that col.1, lines 55-60 passage refers SOLELY to the disadvantages and flaws of the prior art compositions, while the composition of Pregozen invention is an AQUEOUS composition (col.2, line 66) comprising from about **0.02 to about 0.25 weight-percent of potassium sorbate**, from about **0.05 to about 0.20 weight-percent of citric acid**, from about 0.02 to about 0.20 weight-percent of disodium ethylenediaminetetraacetate, from about 0.03 to about 0.24 weight-percent of a cationic biocide selected from the group consisting of (a) polyhexamethylene biguanide hydrochloride and (b) poly[oxyethylene(dimethyliminio)ethylene(dimethyliminio)ethylene dichloride]; and the

remainder to 100 weight-percent water, wherein the pH of the composition is from about 3.5 to about 4.5. (see col.2, lines 65-68 through col.3, lines 1-9) Therefore, the COMPOSITION of the instant claims per se is clearly anticipated by Pregozen.

9. 35 U.S.C. 103(a) rejection of claims 16 and 17 over Pregozen in view of Small is withdrawn in light of Applicants remarks.

10. With regard to rejection under 35 U.S.C. 103(a), wherein the deficiency of Dhillon reference with regard to claims 16, 17 is remedied by Small, Applicants arguments reside in contention that there is no motivation to combine Small reference with Dhillon, because Dhillon teaches that his composition has a particular combination of components to minimize redeposition of particles.

This is not found persuasive, because with regard to Dhillon, the composition of Dhillon also bears the transitional phrase "containing", which is synonymous with "comprising "including," or "characterized by," and is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See, e.g., Genentech, Inc. v. Chiron Corp., 112 F.3d 495. Therefore, taking into account the variety of acidic and basic ingredients in Dhillon, and permutations of their amounts that result in fluctuations of pH, a person skilled in the art would have found obvious to add the TMAH, or ammonium hydroxide of Small, that is a known pH adjuster into the composition of Dhillon, in order to maintain stable pH, and will thus arrive at the instant claims.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP §

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706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kornakov whose telephone number is (571) 272-1303. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Kornakov

Michael Kornakov
Examiner
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04/17/2004